# ENGINEERING CHANGE REQUEST FORM

| Requester Details  |   |  |  |
|--------------------|---|--|--|
| Requested By:      | Ramya N   | ECR Number:  | ECR/12/9/20188                               |
| Employee Code:     | QA23  | Site:  | Corporate                                    |
| Job Position       | Manufacturing Engineer  | Entity:  | Corporate                                    |
| Change Details     |   |  |  |
| Change litle:      | Change in 4299 Project Test in engineering Change Request (Design Change).  |  |  |
| Project Name:      | Engine Deita hawk EP503-EP  | Part Name:<br>Proposed Closure   | Front Impact Airbag System                   |
| Requested Date:    | 9/12/2018 3:53:23   | Request Date:  | 9/30/2018                                    |
| Change Description |   |  |  |
| Change Category:   |   |  |  |
| V                  | Design Engineering  |  |  |
| $\checkmark$       | Document Control  |  |  |
| <b>V</b>           | Manufacturing Engineering   |  |  |
|                    | Master Schedulers   |  |  |
|                    | Material Planners   |  |  |
|                    | Production Schedulers   |  |  |
|                    | Program Managers  |  |  |
|                    | Quality Engineering   |  |  |
| Type of Change:    |   |  |  |
| V                  | Major Change (Class A) ( Production line cannot run without sign off)   |  |  |
|                    | Major Change (Class B) ( Production line can run after QC Associate has verified th<br>for approval. )  | ne parts are within sp   | ecification. RFC form can then be circulated |
| <b>V</b>           | Minor Change (Class C) ( Production line can run if dimensions are within specifica   | tion. RFC form can be  | submitted with the first off part to QC.)    |
| Reason:            | Major Change (Class A) (Production Line cannot run without Sign Off Major Class<br>Major Change (Class B)<br>Major Change (Class C) (Production Line can if dimensions are with in specificatio<br>submiited with the first off Part to QC. | b<br>on . RFC Form can be  |  |
|                    |   | 10 54.5 d 5 1000   |  |
|                    |   | ).   |  |
|                    |   |  |  |
|                    |   | non tome,<br>di<br>1 ser<br>2 |  |

Area of change:

A good example of the change management process in action can be found in <u>software development</u>. Often users report bugs or desire new functionality from their software programs, which leads to a <u>change request</u>. The <u>product software</u>Â company then looks into the technical and economical feasibility of implementing this change and consequently it decides whether the change will actually be realized. If that indeed is the case, the change has to be planned, for example through the usage of <u>function points</u>. The actual execution of the change leads to the creation and/or alteration of <u>software code</u>Â and when this change is propagated it probably causes other code fragments to change as well. After the initial test results seem satisfactory, the documentation can be brought up to date and be released, together with the software. Finally, the project manager verifies the change and closes this entry in the change log.



Another typical area for change management in the way it is treated here, is the <u>manufacturing</u> domain. Take for instance the design and production of a <u>car</u>. If for example the vehicleâ€<sup>M</sup>s air bags are found to automatically fill with air after driving long distances, this will without a doubt lead to customer complaints (or hopefully problem reports during the testing phase). In turn, these produce a change request (see Figure 2 on the right), which will probably justify a change. Nevertheless, a â€<sup>#</sup> most likely simplistic â€<sup>#</sup> cost and benefit analysis has to be done, after which the change request can be approved. Following an analysis of the impact on the car design and production schedules, the planning for the implementation of the change can be created. According to this planning, the change can actually be realized, after which the new version of the car is hopefully thoroughly tested before it is released to the public.

Benefits of Change:

|              | Capacity              |
|--------------|-----------------------|
|              | Customer Satisfaction |
|              | Improve productivity  |
|              | Improve quality       |
|              | Prevent defect        |
|              | Reduce unit cost      |
| $\checkmark$ | Technical Development |
|              |                       |

Risk Analysis

Select Risk Template :

Risk and Opportunity

View Risk

| Dimensions (if | (if Required)  |  |
|----------------|--|--|
|                | Design Engineering   |  |
| $\checkmark$   | Document Control   |  |
|                | Manufacturing Engineering  |  |
| $\checkmark$   | Master Scheduler   |  |
|                | Materials Planner  |  |
|                | Program Manager  |  |
|                | Quality Engineering  |  |
|                |  |  |
| Documents to C | to Change  |  |
| $\checkmark$   | Alerts, Deviations â€" copy entire team, including Team<br>Leadsonce approved. |  |
| $\checkmark$   | Approved Supplier List   |  |
| $\checkmark$   | BAAN Update  |  |
| $\checkmark$   | Cal Val Log  |  |
| <b>V</b>       | Calibration Instruction  |  |

- Complete Validation Plan
- Cost Analysis
- Customer Drawing
- Customer or Supplier Pkg
- DFMEA Updates
- PPAP package organized and link sent to Doc Control
  - Update DVPR

#### Customer Notification Required

4

Does this change request require customer notification?

If YES, did customer approved the change requested?



Г NO

Attachment

<u>AquaProExport</u> (4).xlsx

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| Approvers                              | Comments            | Approval Status | Rejection Status | Approved/Rejected<br>Date |  |
|--|---------------------|-----------------|------------------|---------------------------|--|
|  |                     |                 |                  |                           |  |
|  |                     |                 |                  |                           |  |
|  |                     |                 |                  |                           |  |
| Implementation Section                 |                     |                 |                  |                           |  |
| Does this change needs a new project ? |                     |                 |                  |                           |  |
| Implemented By                         | Implementation Date |                 |                  |                           |  |
|  |                     |                 |                  |                           |  |

# COMMENTS

Ramya N commented as Change management (ITSM) ... The objective of change management in this context is to ensure that standardized methods and procedures are used for efficient and prompt handling of all changes to control IT infrastructure, in order to minimize the number and impact of any related incidents upon service.

Ramya N commented as Change management is an umbrella term that covers all types of processes implemented to prepare and support organizational change. ... Change management in the context of project management often refers to a change control process when working on a project

Ramya N commented as Document that describes the requested change and why it is important; can originate from PROBLEM REPORTS, system enhancements, other

projects, changes in underlying systems and senior management, here summarized as REQUIREMENTS (Dennis, et al., 2002). Important attribute:  $\hat{a} \in \tilde{g}_0/no-go$  decision $\hat{a} \in \mathbb{T}^M$  i.e. is the change going to be executed or not?

## **RISK FORM**

|   |   |  |          | J  |            |                        |   |               |                  |
|---|---|--|----------|--|------------|------------------------|---|---------------|------------------|
| Objective   | Failure in Meeting  | Effect of Failure  | Severity | Cause  | Occurrence | Risk =<br>Sev x<br>Occ | Recommended<br>Action   | Who           | Promised<br>Date |
| There is considerable<br>overlap and confusion<br>between change<br>management, change<br>control and<br>configuration<br>management. The<br>definition below does<br>not yet integrate these<br>areas.<br>Change management<br>has been embraced for<br>ts ability to deliver<br>benefits by improving | The project manager<br>determines the costs and<br>benefits of the proposed<br>CHANGE REQUEST,<br>resulting in CHANGE<br>COSTS AND BENEFITS.<br>This and the above<br>sub-activity can be done in<br>any order and they are<br>independent of each other,<br>hence the modeling as<br>unordered activities. | Based on the CHANGE<br>REQUEST, its CHANGE<br>TECHNICAL FEASIBILITY<br>and CHANGE COSTS AND<br>BENEFITS, the change<br>committee makes the go/no-go<br>decision. This is modeled as a<br>separate activity because it is<br>an important process step and<br>has another role performing it.<br>It is modeled as a sub-activity<br>(without any activity containing<br>it) as recommended by Remko<br>Helms (personal<br>communication). | 40       | The extent of the change (i.e.<br>what other items the change<br>effects) is determined in a<br>CHANGE IMPACT<br>ANALYSIS. It could be<br>argued that this activity leads<br>to another go/no-go decision,<br>or that it even forms a part<br>of the Analyze change<br>request activity. It is<br>modeled here as a planning<br>task for the change builder<br>because of its relationship<br>with the activity Propagate<br>change. | 60         | 24                     | The changes resulting<br>from Execute change<br>have to be propagated<br>to other system parts<br>that are influenced by it.<br>Because this and the<br>above sub-activity are<br>highly dependent on<br>each other, they have<br>been modeled as<br>concurrent activities. | Mazar<br>Khan | 9/30/2018        |

### Risk and Opportunity

| the affected system      |   |  |  |  |  |
|--------------------------|---|--|--|--|--|
| and thereby satisfying   |   |  |  |  |  |
| "customer needs," but    |   |  |  |  |  |
| has also been criticized |   |  |  |  |  |
| for its potential to     |   |  |  |  |  |
| confuse and needlessly   |   |  |  |  |  |
| complicate change        |   |  |  |  |  |
| administration. In some  | 2 |  |  |  |  |
| cases, notably in the    |   |  |  |  |  |
| Information              |   |  |  |  |  |
| Technology domain,       |   |  |  |  |  |
| more funds and work      |   |  |  |  |  |
| are put into system      |   |  |  |  |  |
| maintenance (and         |   |  |  |  |  |
| change management)       |   |  |  |  |  |
| creation of a            |   |  |  |  |  |
| system [2] Typical       |   |  |  |  |  |
| invostmont hv            |   |  |  |  |  |
| organizations during     |   |  |  |  |  |
| initial implementation   |   |  |  |  |  |
| of large FRP systems     |   |  |  |  |  |
| is 15 to 20 percent of   |   |  |  |  |  |
| overall budget.          |   |  |  |  |  |
| overali buuyet.          |   |  |  |  |  |

# COMMENTS

Ramya N commented as Besides activities, the process-data diagram (Figure 1) also shows the deliverables of each activity, i.e. the data. These deliverables or concepts are described in Table 3; in this context, the most important concepts are: CHANGE REQUEST and CHANGE LOG ENTRY. A few concepts are defined by the author (i.e. lack a reference), because either no (good) definitions could be found, or they are the obvious result of an activity. These concepts are marked with an asterisk ( $\hat{a} \in \hat{a} \in \mathbb{T}M$ ). Properties of concepts have been left out of the model, because most of them are trivial and the diagram could otherwise quickly become too complex. Furthermore, some concepts (e.g. CHANGE REQUEST, SYSTEM RELEASE) lend themselves for the versioning approach as proposed by Weerd,[6] but this has also been left out due to diagram complexity constraints.